

endomyocardial biopsy has enormous and exciting potential in both clinical and research applications.

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Fine-Needle Aspiration Biopsy Cytology

CYTOLOGICAL DIAGNOSIS by fine-needle aspiration biopsy is a highly reliable, safe and inexpensive laboratory procedure. The advantages of needle aspiration biopsy include rapid diagnosis and simplicity with minimal discomfort and morbidity. A conclusive diagnosis of malignancy or etiological agent can usually be established without need to carry out open biopsy and frozen section of suspected lesions. For breast or superficial lesions, it is a feasible office procedure easily applied to patients with newly discovered palpable masses. At times, thoracotomy or laparotomy can be avoided. With the help of the image fluoroscopic intensifier in radiology, pulmonary lesions are accessible to the needle. With the guidance of ultrasound, biopsy specimens of deep abdominal or retroperitoneal masses can be taken.

An unequivocal diagnosis of malignancy may help physicians expedite necessary surgical therapy or it may influence therapeutic strategy in advance, making it possible to avoid less than ideal surgical procedures. For example, the cytological diagnosis of undifferentiated small cell carcinoma of the lung may be adequate for treatment by combined radiation and chemotherapy. Patients can be more completely informed before definitive surgical operation if this is desirable. The method has an overall diagnostic accuracy of 84 percent to 92 percent. A negative or a doubtful aspiration due to various reasons (such as faulty technique, poor sample or inexperience) must be followed by a repeat aspiration or an expeditious open diagnostic procedure to prevent a delay in appropriate treatment. False positive diagnoses have been reported to occur in up to 0.9 percent of aspirates.

The technique of aspiration sampling of palpable masses (breast, thyroid, lymph nodes and the like) and sonographically or radiologically

visible lesions from different organs (lungs, pancreas, kidneys and so forth) is done with a 20-ml disposable syringe attached to a 22-gauge needle of appropriate length (1 to 4 inches). The use of an aspiration device (such as a Cameco syringe pistol, imported from Sweden by Precision Dynamics Corporation, Burbank, California) is preferred. The skin is first cleansed. Usually local anesthesia is not necessary. After the needle has penetrated the lesion, the syringe is retracted. Several short, quick lesional penetrations are done through the original puncture. Before the needle is removed, the vacuum in the syringe is equalized by releasing the piston. The needle is then withdrawn. The diagnostic specimen is in the needle, not in the syringe, unless fluid has been aspirated from a hollow organ, or a cystic or necrotic mass. Smears are prepared, fixed in 95 percent alcohol and stained with the method of choice. If clinically indicated, the specimen may also be cultured. Any tissue particle remnants should be fixed in formalin and submitted for a cell block histologic study to facilitate diagnostic accuracy and a possible typing of neoplasia.

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Neonatal Sepsis and Infective Endocarditis

ALTHOUGH THE CLINICAL PRESENTATION and antimicrobial therapy of infective endocarditis in infants are similar to those in adults, the events precipitating infection in neonates are often different and continue to change as medical technology advances. Although congenital heart disease is a known factor predisposing to infective endocarditis in infancy, in most reported cases of infective endocarditis in patients younger than 2 years old there is no preexisting heart disease. This prevalence of infective endocarditis in infants with normal hearts is partly related to the increased frequency of sepsis in these infants. With increased use of cardiac catheterization and hyperalimentation in this age group, there is in-